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ABSTRACT

Psychology is again revitalizing efforts to explore the nature and extent of human consciousness. Although consciousness has always been the central subject matter of psychology, various metholodological and ideological "schools" have often quarreled as to exactly what constitutes the appropriate measure of the subject. What is most significant about the resurrection of consciousness as a focal point for psychological inquiry--although for some it was never really dead--is that advances and innovations in scientific methodology and in the philosophy of science as well have brought what once were considered metaphysical, non-empirical and even theological issues within the realm of rigorous scientific investigation. Methodological approaches to consciousness have included both the empirical-experimental, involving psychobiology, psychopharmacology and biofeedback research and the empirical-experiential, resulting in increasing cohesion in these two seemingly conflictual modes of study. Possibly the most significant issue for the inclusion of consciousness as an acceptable subject matter for scientific psychology is a better understanding of the very nature and process of science itself. Those who claim status as scientists must examine, or re-examine, the philosophy of their own discipline to discover, or rediscover, the workings of scientific methodology and attitudes concerning knowledge itself.
(Author/SJL)

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Psychology Tomorrow: Explorations of Consciousness

As beginning psychology students we are introduced to psychology with a definition of the discipline which typically includes reference to concepts such as "mind", "psyche", "consciousness", "cognition and cognitive processes", and in more recent time to the concept of "behavior" as well. Texts defining the field of psychology, along with its historical origins and development, are assigned both at the introductory level and at higher undergraduate and graduate school levels. Included in this context are texts such as those by Fred Keller (The Definition of Psychology, 1937) and Edna Heidreder (Seven Psychologies, 1933). Coursework in the area of history and systems of psychology ranges from rather eclectic and comprehensive coverage of the variety of historical developments and theoretical-conceptual approaches to psychology (Chaplin & Kraeiwic, 1968; Kaplan, 1964; Marx & Goodson, 1976; Marx & Hillix, 1963; Turner, 1965, for example) to more specific identification of the field as viewed from a particular perspective (e.g., Hull, 1943; Skinner, 1974; Watson, 1913). Often, however, even in the most eclectic definitional scheme the matter of human consciousness is either avoided, or given only cursory attention, and then more likely than not only as a topic somehow connected with the cognitive processes, which themselves are typically restricted to learning, thinking and language employed in the formal rational mode. Consciousness as <u>the</u> subject matter of psychology was postulated by the early "schools" such as Structuralism where Titchener defined the consciousness that psychology studies as "experience as dependent on the experiencing organism: (Heidbreder, 1933, p. 126). Angell's Functionalist school also defined consciousness as the subject matter of psychology, although the Functionalists emphasized the processes and operations of consciousness more than the contents or elements of consciousness as did the Structuralists. In both schools, however, the emphasis remained not on consciousness <u>per se</u>, but upon the contents, or activities of consciousness as it dealt with those contents. In addition, while consciousness was defined as the subject matter

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for psychology, even these early schools were prone to emphasize the empirical origin and extent of the contents dealt with by consciousness. This emphasis, along with the acceptance of personal introspection as a method for the study of consciousness, was also expressed by William James. James made a significant addition to the definition of psychology when he wrote of the concept of "stream of consciousness" (James, 1890) following personal experimentation with nitrous oxide. While the tradition of introspection has been maintained in selected areas of psychology, particularly aspects of Humanistic psychology, e.g., clinical-counseling psychotherapeutic psychology, Existential psychology, Phenomenological psychology, including certain theories concerning perceptual and cognitive functions and development, the concept of "stream of consciousness" can be found to exist in psychology both before and after James' apparent discovery. For example, much of the literature and practices in what might be referred to as Asian or Eastern Psychology (ref. Evans-Wentz, 1960, 1968; Murphy & Murphy, 1968; Swami Rama, 1975), as well as more recent literature and research on altered states of consciousness (Aaronson & Osmond, 1970; Ornstein, 1972, 1973; Tart, 1969; Weil, 1972), yoga psychology and the psychology of meditation (Naranjo & Ornstein, 1971), and an empirical-experimental area of biofeedback, psycho-biological and psychopharmacological research (Brown, 1974; Ferguson, 1973; Rose, 1976; Scientific American, 1972; Williams, 1970). An empirical-experiential approach to consciousness is also gaining increasing recognition and professional application (ref. Brain-Mind Bulletin; Journal of Transpersonal Psychology, and also to Fadiman & Kewman, 1973; Foucault, 1967; Osmond, 1974; Lilly, 1972). The relevance of consciousness theory and research, including seemingly bizarre topics as paranormal phenomena such as telepathy, psychokinesis, "astral projection", etc. (Calder, 1970; Jacobson, 1974; Krippner & Rubin, 1974; Ostrander & Schroeder, 1970, 1974) has been cited in the treatment of various psycho-pathological conditions, e.g., schizophrenia, autism, drug addiction and

alcoholism (Laing, 1965, 1967; Pearce, 1973; Szasz, 1970, 1975). Included in such efforts are attempts not only to study consciousness, either through the experimental method or an experiential approach, but also explorations aimed at modelling and mapping human and supra-human dimensions of awareness. (Fischer, 1971; Lilly, 1972; Ring, 1974). The need for such maps for practical application is testified to by authors capable and willing to extrapolate to both the near and distant future in the evolutionary development of human-kind, specifically with respect to issues of human intervention in the evolutionary process itself (Osmond, et. al., 1974; Rosenfeld, 1975; Taylor, 1971).

Behavioral psychologists, particularly the older generation of "S--R mechanistic" psychology, along with certain empirically oriented biopsychologists, have tried to rid psychology of the troublesome nuisance of consciousness. Neo-Behaviorists, in conjunction with a large number of biologically oriented social and medical scientists, geneticists, biochemists, and other social scientists such as philosophers are giving serious consideration to human and even extra-terrestrial consciousness as a very pertinent area of investigation. In fact, it often appears that the more serious concern for the study of consciousness in its various forms and levels comes not from psychology and psychologists as one might logically expect, but rather from the non-psychologists. Again, however, a review of the history of psychology as a discipline reveals that much of the field has been stimulated by, or originated from non-psychological disciplines and scientists. It matters little, however, to the scientist from whom the theory originates, or by whom the research is conducted, so long as the relevant subject matter is explored and understood. It is to this latter consideration that the psychology of tomorrow is turning. I say "turning" primarily for those who are unaware that many psychologists, along with other scientists and practitioners, have already turned to that endeavor. This effort includes not merely an observation and exploration of consciousness from the traditional model of experimental objectivity, but an attempt to engage oneself personally in the expansion and enrichment of

human consciousness, with the recognition that each personal success is therefore also a collective social, international and ultimately universal achievement, for that is the nature of consciousness itself--the awareness of connectedness of all of life, manifest and unmanifest. For many this will seem to be mataphysics and mysticism, two areas which most understand only by definition and not by any degree of contemplative awareness. A most significant reason for the inclusion of consciousness as a primary consideration for psychology is that it promotes a greater understanding of the very nature and process of science, as well as of any other attempt to increase human awareness. How many who claim status as scientist have taken the time to examine the underlying fundamental philosophy of science itself? (In this connection, refer to Kaplan, 1964; Kuhn, 1970; Royce, 1964; Turner, 1965, to mention a few.)

But What is Consciousness?

Thus far we have spoken of consciousness as though we knew what it was. In point of fact this is largely a false assumption, analogous in certain respects to the concepts of time, space and energy which physicist is not necessarily bothered by the lack of absolute understanding of his concepts, so too may the psychologist proceed to speak of and work with consciousness with only a hypothetical and assumptive understanding. Like the concepts of physics, consciousness may be defined in an operational manner, and studied through its contents and processes of "using" such contents, e.g., abstracting, categorizing, deciding, etc. Thus, consciousness becomes the "background" upon which the "figural contents" of cognitive awareness via symbolization, e.g., through images, or through abstract symbols such as are found in mathematics and semantic or linguistic symbols, as well as the figural contents of empirical sensations and the resultant psychobiologic emotional experiences of the individual become embedded. This is more-or-less the position adopted by psychology, both past and present, and very probably by many psychologists of the future. There is, however, the very real possibility of the study of consciousness per se, in its "pure" form, uncon-

taminated as it were by the impressions of the senses and other bodily processes, or by the workings of the mental contents. This process entails the development in each individual through a variety of techniques, scientific methodology, or extending to more "artful" and experiential methods which may or may not fit the stereotyped model of what constitutes "good" science. In this latter category would fit the esoteric disciplines and techniques of yoka (Evans-Wentz, 1968; Swami Rama, 1975), meditation and other techniques for consciousness alteration; including psychopharmacologic and psychocybernetic control (Lilly, 1972; Naranjo & Ornstein, 1971; Ostrander & Schroeder, 1970; Rosenfeld, 1975; Scientific American, 1972; Tart, 1969; Taylor, 1971; Weil, 1972). There is a need, as Tart has stated for "state-specific sciences", i.e., the study of consciousness by scientists who have developed methods of observation and communication while engaged in a particular state. This requires, of course, that the scientist be able to relinquish, at least temporarily, some conventional or customary ideas, values and procedures and adopt a different paradigm (ref. Kuhn, 1970). This may be somewhat frightening and threatening for some scientists, even though they may be willing to accept the notion at a conceptual level. Perceptual, social and humanistic psychologists recognize the importance of frame of reference, point-of-view, perspective, etc., as vital determinants of experience and behavior. A similar concept is expressed by physicists in recognition of the "principle of complimentarity" postulated by Bohr and the "indeterminancy principle" of Heisenberg (ref. Koestler, 1972, pgs. 51-55). In psychology, too, C. G. Jung expressed the need for conceptual shifts in attempting to interpret certain phenomena in the area of paranormal psychology, for example with his concept of "synchronicity" of time-space and events. Osmund et. al. (1974) cites a similar need in exploring the "special worlds" of diverse types of people, including the mentally disturbed, the excessively violent and anti-social, and so on. Others have expressed the same philosophy, particularly with respect to the inner experience of those conventionally defined as "mad" and

"insane" (Fadiman & Kewman, 1973; Foucault, 1967; Laing, 1967; Pearce, 1973; Szasz, 1970). One author in particular (Royce, 1964) discusses the same issue, but with emphasis upon the various modes of "psychoepistemology" and the "encapsulation" of scientists caught up in a specific mode or paradigm and therefore unable to flexibly adopt another approach to a given area of investigation. The consideration of adequate and appropriate models for science and scientific investigation, experimentation and theorizing is a crucial and fundamental issue for the entire philosophy of science. This was mentioned earlier (ref. p. 3) and reflects a growing awareness that the rather mechanistic, strictly behavioristic and excessively biologically-rooted and reductionistic paradigms are not totally effective in dealing with certain aspects of human experience, especially not with so pervasive a phenomenon as consciousness. But I am not here to argue philosophy of science, for that would take more time than we have. There are sufficient references for the interested reader mentioned in the bibliography of this paper, the authors of which express the issues more cogently and exhaustively than I could at this time.

Mapping Consciousness:

In recognition and acceptance of much of the aforementioned thesis that consciousness can and should be studied by devising new experimental techniques, as well as by adopting certain techniques which have existed for thousands of years, if only in non-Western cultures, some individuals have undertaken the project of constructing maps of levels of consciousness. Most notable of these recent efforts are those of Fischer (1971), Lilly (1972) & Ring (1974), although such maps have existed in literature much older than these accounts (e.g., the Tibetan Book of the Dead, translated by Evans-Wentz, 1960). This may also stimulate renewed interest in the interpretation of the Tibetan text by Leary, Metzner and Alpert (1964). It may also stimulate some unreasonable fears and unfavorable memories of Leary and the psychedelic movement of the late 1960's. However, we should recall that psychopharmacology is a potent

tool for constructive and health-generative programs in the proper hands. Adequate testimony to that is given in the programs which have more carefully explored the use of certain chemical agents, such as LSD, for therapeutic purposes in the treatment of alcoholism, schizophrenia, autism, and in the terminally ill. In fact, part of the effort to increase the exploration of consciousness in psychology in the near future is a "consciousness raising" and attitude change towards the clinical and scientific-experimental application of pharmacologic agents (ref. Aaronson & Osmond, 1970; Lilly, 1972; Weil, 1972). Szasz (1975), contributes an engaging discussion of this topic in what he describes as "ceremonial chemistry" and the "ritual persecution" of chemical agents in contemporary society. A plea for the preservation of various ethnic rituals and knowledge concerning the use of psychotropic or psychoactive plants used for medicinal and religious ceremonial purposes (and therefore typically for consciousness alteration and expansion) is made by Efron, et. al. (1967). Perhaps those who cannot comfortably cope with ideas of drug research and the possibilities such research holds for behavioral science would benefit from reading Rosenfelds text (1975) dealing with current and predicted mechanisms and procedures for controlling life and the mind of man, including psychogentics and genetic engineering, psychochemistry, psychobiology and psychocybernetics. Those who seek a more familiar rationale of what may be characterized as "military and nationalistic defense mindedness" might prefer to examine the text by Ostrander and Schroeder (1970) which indicates that the most relevant and up-to-date research and application of psychic and parapsychological phenomena is occurring behind the Iron Curtain. Undoubtedly, social, political and economic pressuress will continue to be exerted upon these persons and organizations willing to explore the dimensions of human consciousness from various points-of-view, but then, such curiosities have always incurred a certain degree of social resistance throughout the history of humankind. Ignorance and knowledge

will probably always stand locked in battle so long as there exists the fear which ignorance breeds. For those with a more positive attitude and outlook, I am pleased to report that a weekend symposium on the psychology of consciousness was recently conducted (May 8-9, 1976) at the University of California, San Francisco, the results of which should be forthcoming soon. In addition, during June 17-20, 1976, an International Yoga and Meditation Conference will be held in Chicago, and during which demonstrations of yogic phenomena will be given under experimental scientific conditions.

In closing, I would predict that the psychology of tomorrow will be the psychology of the past, specifically yoga psychology which is the psychology of consciousness at the human and transcendental levels. Psychology will merge more closely with biological and physical sciences in describing, exploring and experiencing that consciousness. Theory of physics and of psychology will coalesce into complimentary modes of expression of the nature of matter, energy and life itself. Science and religion will no longer be viewed as antagonists, but as mutually reinforcing paradigms. The metaphysics and mysticism of yesterday will become the science of tomorrow.

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